



Research Article

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DEVELOPMENT OF QUESTIONNAIRES AND THEIR VALIDITY TO ASSESS SU-I-MIZAJ UMOOMI (GENERALISED IMMEDIATE TEMPERAMENT) IN THE UNANI SYSTEM OF MEDICINE

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ABSTRACT

Introduction: The development of Questionnaires in the Unani system of medicine is crucial at this age. When conducting clinical trials to assess safety and efficacy in the Unani setting, it is essential to use a standardised Domain model grounded in Unani principles; however, such a scale has not yet been developed. **Aim of study:** to construct Questionnaires for validity and internal consistency to establish their reliability and standardise a research tool in the Unani system of medicine, incorporating the Unani basic principle of health. **Methods and rationale:** A rigorous literature search of Unani and modern medicine books and articles available online was conducted for a comprehensive review, aligned with the standard method for synthesising questions. Lastly, the number of questions has been fixed at 24, with 23 domains. **Analysis and Discussion:** Standard formulae are used to analyse the statistics for I-CVI, S-CVI, S-CVI/UA, S-CVI/Ave, and Modified Kappa. **Result:** I-CVI; Item 1 reached the *acceptable* threshold; 9 items demonstrated excellent agreement. 14 items achieved perfect agreement, reflecting unanimous expert consensus. Universal agreement is also 56.5%. This is moderate. Average of the entire CVI ≈ 0.9541 . This is excellent. Modified Kappa (K*) ranged from 0.763 to 1.000, indicating excellent agreement beyond chance. Pc values were either 0.156 (for items with partial agreement) or 0.031 (for unanimous agreement). **Conclusion:** The Questionnaire is relevant, feasible, and valid for assessing the Su-i-Mizaj Umoomi in the OPD, for further evaluation of consistency and prevalence rates, and for validating the Unani principle of health preservation and restoration in the real world.

Keywords: Questionnaire, Development, Unani Principles, Human health, Questionnaire Validity, Reliability.

INTRODUCTION

The development of questionnaires in the Unani system of Medicine is considered a challenging task. While conducting research, Unani researchers are obsessed with using modern standard questionnaires, which never align with the Unani approach to disease diagnosis and to the conceptualised scale of severity; thus, the results present a sceptical series of findings for future outcomes.

Questionnaires are essential research tools, particularly in medicine, as they enable the structured collection of data.¹ Their importance is especially evident in qualitative research.² However, the Unani system of medicine reveals a significant gap. The field has historically focused on hypothetical, abstract topics and behavioural approaches rather than rigorous scientific validation.³

Developing a series of questionnaires that cover all aspects of the fundamental concepts in Unani medicine is not possible. A section of it particularly highlighted the overall health dimensions to diagnose the underlying pathology known as Su-i-Mizaj Umoomi (Generalised immoderate temperament).³

The Millennial-old, wisdom-based knowledge is not merely a science but a way of healthy life, in collaboration with the tri-faceted reality, such as material, soul, and intellect, is a pivotal part of this questionnaire.

Background of study

It is important to understand the value of Unani-based questionnaires to assess Su-i-Mizaj (immoderate temperament) in its general form. This is not an attempt to cover everything before defining Mizaj (moderate temperament). In Unani medical philosophy, Mizaj is called Itidal (Mode), and in chemistry, it refers to the equilibrium in the body's overall composition.⁴ It can be said that Mizaj is immeasurable, a bio-physical aspect of composition.³

Deviation from the mode is called Su-i-Mizaj (immoderate temperament). It is a representative of pathological aspects; it cannot be bound to only four. This leads to serious misdiagnosis and improper treatment. At least 200 types of human cells themselves need to be differentiated into each cell, four types of Su-i-Mizaj.^{4,5}

The human body is under the control of the Tabī'at (*medicatrix naturae*). Many times, it is unable to do so, and the severity of the disease or its course changes. Often, it presents with signs and symptoms throughout the body; this condition is called Su-i-Mizaj Umoomi (generalised immoderate temperament).³⁻⁷

The renowned physician Jurjani discusses the occurrence of immoderate temperament in two ways: first, with respect to the components of the human body, and second, with respect to their arrangement. Then, he described the Su-i-Mizaj (immoderate

temperament), defining the exit state from Itidāl (Moderate) in one or more properties; this is the true condition of immoderate temperament.⁷

It is a pathological state in Mutashabih-al-Ajza (Initial part/Cell).⁴ By the perception, there are two types: one type is that it alters the sensation perceived, which is Su-i-Mizaj Mūstawī (constant intemperament); and the second, which remains the perception of sensation, is Su-i-Mizaj Mūkhtalīf (unstable morbid Temperament). Both conditions indicate underlying pathological features and their severity. e.g. vitiligo is an example of Mūstawī.^{3,5,8}

Psychometric assessment is a pivotal aspect of a person's evaluation. As the Value of the Su-i-Mizaj Umoomi (Generalised immoderate temperament) is marked in the Unani system of medicine, which touches on the area of the unseen with reference to philosophy, ascertain the domains to be assessed for diagnosis with special accuracy and individuality.⁵

Ibn Rushd writes, with reference to Galen, that, following the health guidance, a person reaches a physiological age in good health, but, by the same guidance, another person does not. Shows that everybody possesses different susceptibilities because many properties of Tabī'at (*medicatrix naturae*) are hidden and have no features, so Tabī'at's (*medicatrix naturae*) abilities are infinite.⁴ Following healthy parameters is a partial reason for being healthy. External factors also contribute to disease.

Objective of the study

1. To develop a questionnaire, operationalise the Basic principles of Unani medicine for preserving and promoting health.
2. To check the internal consistency and validity of the Questionnaire for assessing *Su-i-Mizaj Umoomi* in Unani research OPDs.

METHODOLOGY AND RATIONALE

This study is part of PhD research work in the 1st phase to develop Questionnaires, followed by the 2nd phase of validation in OPDs for further study.

To achieve the study's aim, the standard rules for developing questionnaires were followed, and a review of the literature in classical Unani texts was conducted to cover areas that reflect the basic principles of Unani Medicine. Each participant will be asked about their parents' level of modesty to rule out the transmission of reproductive traits across generations. Sites/place of the organs to see the anatomical variation, habit of food/drink with respect to quantity, quality and time; what general people consider harmful in the generous meaning of Hot/Cold/Dry/Wet food or drugs, how they express themselves, what Hot/Cold/Dry/ Wet environment, whether it has an effect on the body. How much pain/fatigue/bored while working physically/mentally, links between them and general wellbeing.^{4,10} How is the proportion of sleep/wakefulness, its impact, mental or physical rest or extraneous workload, excretion regularities, engorgement in the body, daily routine exercise pattern, used to cupping/leeching, purgation, emmenagogue, etc., when they feel chills or heat? Initially, 56 questions were developed, and lastly, 23 domains were covered within 24 Questions validated.⁵

The accomplishments or supporting literature are drawn from modern books, online journals, and other guidelines for constructing closed-ended, binomial, ordinal, multiple-choice, or Likert-scale questions, aligned with the concept and its practical implementation.¹ In Unani terms, the WHO international standard terminologies for Unani medicine are used.¹

Standard steps were followed to construct questionnaires

A standard method is used to develop and validate questionnaires. The following steps have been taken to construct the Questionnaire.^{12,13}

Step I- Conduct literature review; Classical Literature has been sourced from original translations by reputed scholars and organisations, such as Kamil-ūs-san't, Alqanun Fil Tib, Kitab Al Mansūrī, Kitab Al kūllyat Tib, Kūllyat Nafīsī, Kitab Al-Mukhtarāt Fil Tibb Dhakhera Khwarizm Shahi, Mufarrah-Al Qulub, Mizan al Tib, Miftah-ul-Hikmat, From a modern perspective, Guyton and Hall, and CC Chatterji's Physiology. Hutchison's Clinical Practice, Chamberlin's Robbins Pathologic Basis of Disease, the Oxford Handbook of Clinical Medicine, and research articles available online, including PubMed, Scopus, ScienceDirect, and ResearchGate, were searched for recent evidence-based studies in traditional and integrative medicine.

Step II- A Focus Group Discussion was conducted at the institute with peers and assisted staff to clarify and assess the Questionnaire's applicability to the patients.¹⁴

Step III- Conduct a small Trial (pilot) study in the OPD. A cross-sectional study of 30 cases was conducted to assess the concept's preliminary validity, reliability, and applicability in OPDs. After repeated attempts and further discussion with the PhD Guide and co-guide, the number of Questionnaires was reduced to 35.^{15,16}

Step IV - Conduct expert group rating study: A set of Questionnaires, based on the 28 Domains and 35 questions, was sent to the five raters, experienced academicians, and peers for rating. The Q.N. 1-5 retained; 6-9 merged. 10-11 retained, 13-14 merged, 15 retained, 16 skipped, 17th revised, 18th skipped, 19-20 retained, 21st skipped, 26th skipped, and 22nd to 32nd retained, 33- 35 skipped. 5 domains were merged, and 6 were modified according to the rater's suggestions.

ANALYSIS

1.I-CVI = Number of experts agreed upon/ Total number of experts.

Common thresholds: ≥ 0.78 (for ≥ 5 experts) $\rightarrow$ Acceptable.; $\geq 0.90 \rightarrow$ Excellent content validity.; $= 1.0 \rightarrow$ Perfect agreement.

2.Tests/Indices; S-CVI/UA (Universal Agreement): Proportion of items with I-CVI = 1.0.

$\rightarrow$ Here, $13/23 \approx 0.565$ (56.5%). This is moderate.

S-CVI/Ave (Average): Mean of all I-CVI values.

$S-CVI/Ave = \sum I-CVI / \text{Total Number of Items}$
(Sum of all values / 24). **Sum** $\approx 22.9 \rightarrow$ Average ≈ 0.9541 . This is excellent.

3. Kappa Statistic (Modified Kappa): Modified Cohen's kappa (k^*) analysis for 24 I-CVI values (5 raters, 4-point scale) shows excellent overall content validity.

For content validity analysis, experts' ratings are usually grouped as

1–2 = not relevant; 3–4 = relevant.¹⁷

Modified Kappa (K*) Calculation for Content Validity

Data used: 5 experts; ratings of 3-4 considered relevant.

Formula

$$K^* = (I - CVI - Pc) / (1 - Pc)$$

$$Pc = [N! / (A!(N-A)!)] \times 0.5^N$$

N = number of experts (5)

A = number of experts agreeing

Interpretation of K*

Item Group	K*	Interpretation	Standard scale (K*), meaning
Item 1	0.763	Excellent	<0.40 Poor 0.40–0.59 Fair 0.60–0.74 Good ≥0.75 excellent
Items 2–5, 9–12, 15	0.881	Excellent	
Items 6–8, 13–14, 16–24	1.000	Perfect agreement (Excellent)	

RESULTS

The finalised questionnaire followed Standard Steps, with analysis of I-CVI, Pc, and Modified Kappa.

Domains	Questions constructed	I-CVI	Pc	Modified Kappa K*, ^{13,17}
Anatomical and Structural Assessment	1. Do you have all your organs in their original place with a regular daily routine? (Verified by imaging techniques)	0.80	0.156	0.763
Hereditary and Lifestyle History	2. Are your parents modest in their lifestyle, health, and habitat?	0.90	0.156	0.881
Functional and Emotional Well-being	3. Can you work within desirable limits of time, quantity, and quality with feelings of happiness and ease?	0.90	0.156	0.881
Air Quality and Climate Impact Assessment	4. Is your breathing smooth in your natural climate?	0.90	0.156	0.881
Environmental Comfort and Adaptability	5. How comfortable is your environment without artificial support?	0.90	0.156	0.881
Weather impact assessment on the body.	6. The Effect of a Hot/Cold/Moist/Dry environment on your body?	1	0.031	1.000
Pain Sensitivity and Su-i-Mizaj Mustawi Evaluation	7. Do you feel pain anywhere in the body while working physically?	1	0.031	1.000
Pain Sensitivity and Su-i-Mizaj Mukhtalif Evaluation of the Brain	8. Do you feel pain while doing mental work?	1	0.031	1.000
Hydration response	9. How do you feel after drinking water in normal quantities and intervals (1 glass, two to three hours interval)?	0.90	0.156	0.881
Cold/Hot water drinking habit and impact assessment	10. What do you feel about the habit of drinking cold/Hot water?	0.90	0.156	0.881
Assessment of patients' thinking regarding the Hot medicine	11. When do you think the used medicine is HOT?	0.90	0.156	0.881
Dietary Heat Sensitivity Questionnaire	12. What food do you consider Hot?	0.90	0.156	0.881
Exercise Routine and Fatigue Assessment	13. What is your exercise routine?	1	0.031	1.000
Assessment of following the exercise rule as per the Unani principles	14. Do you set a specific time duration of exercise or stop when you're tired or in pain, and follow post-exercise rules?	1	0.031	1.000
Sleep Benefit Evaluation	15. What benefits do you get from sound sleep?	0.90	0.156	0.881
Extended Wakefulness Impact Assessment.	16. What do you experience after extended awakening?	1	0.031	1.000
Body Weight Stability and Nutritional Balance.	17. Do you feel your body weight changes in relation to your fixed food habits?	1	0.031	1.000
Metabolic Heat and Weight Loss Assessment.	18. Do you feel more than normal heat with decreasing weight, even with a habit of proper food?	1	0.031	1.000
Food Preference and Digestive Suitability Questionnaire	19. What is your preferred pattern of food habits?	1	0.031	1.000
Disease Susceptibility Assessment	20. Are you easily caught or susceptible to any disease? Fever/cold cough/Diarrhoea and Urinary problems	1	0.031	1.000
Imtīla (Engagement) assessment	21. Do you feel uneasiness, heaviness or fullness in entire/ part of your body?	1	0.031	1.000
Su-i-mizaj Barid assessment	22. Do you feel drowsy or mentally dull during the day?	1	0.031	1.000
Ihtibās/Istifraḡh-e-Ghayr Taba'i	23. Do you feel your body produces more sweat?	1	0.031	1.000
Regiminal therapy	24. Are you undergoing bloodletting (Fāsd) or cupping (Hijāmā) therapy for any relief?	1	0.031	1.000

DISCUSSION

The questionnaire comprises 24 items covering 23 domains of the Unani fundamental principles of human health. The results show it is feasible for validation in OPD settings. The tool is designed to highlight subtle clinical signs aligned with real-world situations and factors responsible for disease conditions and susceptibility. The I-CVI was calculated as: ≥ 0.78 Acceptable; ≥ 0.90 Excellent; and $1.00 =$ Perfect agreement. Item 1 reached the acceptable threshold, and 9 items demonstrated excellent agreement. 14 items achieved perfect agreement, reflecting unanimous expert consensus. Universal agreement is also 56.5%. This is moderate; it becomes mathematically harder to achieve universal agreement on every item. (18) Average of the entire CVI is $22.9 \rightarrow$ Average ≈ 0.9541 . This is excellent. Pc values were either 0.156 (for items with partial agreement) or 0.031 (for unanimous agreement). Modified Kappa (K*) ranged from 0.763 to 1.000, indicating excellent agreement beyond chance.

The content validity analysis of the 24-item questionnaire demonstrated consistently high levels of expert agreement. Item 1 achieved a modified Kappa of 0.763, indicating excellent validity. Items 2–5, 9–12, and 15 showed a Kappa of 0.881, also reflecting excellent agreement. The majority of items (6–8, 13–14, and 16–24) reached a Kappa of 1.000, indicating perfect agreement among experts. I-CVI values ranged from 0.80 to 1.00, showing strong expert agreement on item relevance. The finalised 23 Domains have been validated, as the anatomical variation and organ displacement were known concepts; now, with new technologies, they are certain, and detection is feasible. And domain 2 relates to the impact of parental standard of living on the generation, which can be assessed in a logical and scientifically accepted manner. Domain 3 is a highly harmonised state of the human body in relation to the mind-soul-body relationship; it is also applicable to outpatients to check their status. Domains 4–6 assess the human body in relation to its environment through interrogation and examination, thereby enabling evaluation. Domains 7–9 show the level of sensation normally present and the extent of pathology that blocks the perception of pain. The status of restoring hydration in the body, enabling the researchers to rule out under the defined categories. Other domains include habits of a balanced diet and drinking, with timing, appropriate quantity and quality. Perceiving excess heat with decreasing body weight is a very undiagnosed condition that can be identified through this questionnaire. Along with conditions for digestion and the evacuation of waste in accordance with intake, regular bowel habits can be demonstrated using the validated Questionnaire. Proper and gentle exercises, and interrogating adherence to the classical rules, with benefits and harms calculated using the questionnaire. Massage and other regimens used at particular intervals, with or without benefits such as venesection and Cupping, are considered health guidelines based on the person's needs, assessed through the questionnaire. Hot water and air exposure increase body heat, improve the cool feeling, aggravate sweating, and affect whether the body is dry or wet; these effects are measurable and highly important to detect for people with low waste production, which can be measured through the questionnaire. In the same way, the status of sweating, massive engorgement in the body, and feelings of tightness, weakness, fatigue, and daytime drowsiness are validated as measures. This questionnaire can be used to assess susceptibility to recurrent upper respiratory infections, GI upset, or other illnesses.³⁻⁵

The results show its relevance; the understanding and feasibility tests are also excellent, as the Classical description proves.¹⁹ Internal consistency amongst raters is excellent. Philosophy of medicine is applicable. The population may communicate their

problem easily, in their own words. So, from the 1st to the 23rd, domains are excellent in expressing health status in the population.^{4,10,19}

CONCLUSION

Overall, these findings confirm that the questionnaire has robust content validity, with most items receiving unanimous agreement that they fall within the validity range. This supports its feasibility and reliability for application in OPD settings to assess domains of Unani fundamental principles related to health and disease, including Su-i-mizaj Umoomi (Generalised immoderate temperament). The final study will be analysed using 500 cases: descriptive prevalence (frequencies, percentages); reliability (Cronbach's alpha); construct validity (KMO, Bartlett's, EFA); and Confirmatory Factor Analysis (CFA) will be used to assess reliability and validity.

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